

CURRICULUM VITAE Name: Federico Quaini

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Date and place of birth: 07/04/1948, Cremona, ITALY

Education

High School: Liceo Classico 1966

M.D.: University of Parma 1974

Board in Hematology, University of Modena 1977

Current Italian Appointment

Associate Professor of Oncology, University of Parma
Director of the Cardiac Stem Cell Center CISTAC,
University of Parma

Expert Manager on Regenerative Medicine, University
Hospital Parma

Coordinator School of Specialization in Oncology

Previous Appointments 1979-1985: Assistant Professor of Medicine, University of
Parma,

December 1981 and January - July 1984: Research Assistant Professor, Department of
Anatomy, New York Medical College

1984: Adjunct Assistant Professor of Histology, City College University of the NYU

1985-1996: Associate Professor of Medicine, University of Parma

1987: Research Assistant Professor, Department of Anatomy, NY Medical College,

1994, 1997, 2001-2007: Visiting Professor, Cardiovascular Research Institute,
Department of Medicine, NY Medical College

Associate Professor of Oncology, University of Parma 1996-

Teaching positions: Head of the Course in Hematology-Oncology, Faculty of
Medicine-University of Parma; Course in Regenerative Medicine, Faculty of
Biotechnology-University of Parma: Coordinator of the Board in Oncology-
University of Parma

Ongoing collaborative work: 1) P. Anversa, on the identification of human lung stem
cells; 2) D.T. Scadden, Center for Regenerative Medicine, Massachusetts General
Hospital, Boston, USA on bone marrow stem cell niches; 3) P. Madeddu,
Experimental Cardiovascular Medicine, Bristol University, UK on diabetes as a stem
cell disease

Referee: PRIN e FIRB scientific projects from Italian Ministry of University (MIUR)
Heart Research UK and Georgian National Science Foundation

Editorial Board PloSOne

Reviewer for: PloSOne, Biochemical Pharmacology, Stem Cell Translational
Medicine

Recent Supported Research:

Co-Principal Investigator of the NIH Grant entitled: Cardiac Stem Cells and the
Infarcted aging heart, 2004-2009 (Principal Investigator: Piero Anversa);

-Principal Investigator of PRIN MIUR project 2007AL2YNC entitled: Cardiotoxicity
of anti-cancer therapy involves resident cardiac stem-progenitor cells. 2007-2009.

-Co-Principal investigator of the European Project N° 214539 FP7-NMP-2007:

BIOCENT BIOactive highly porous and injectable Scaffolds controlling stem cell
recruitment, proliferation and differentiation and enabling angiogenesis for
Cardiovascular ENGINEERED Tissues, 2008-2013

-Co-Principal Investigator of Regional Project on Regenerative Medicine, 2008-2012

Membership

European Society of Cardiology
Council Basic Cardiovascular Science
American Heart Association
Italian Society of Cardiovascular Research

Statement of Interest: Translational Research in Regenerative Medicine, Identification of the role of adult somatic stem cells in several pathologic states including cardiovascular and lung diseases.

Scientific Publications

1. Delsignore R, Baroni MC, Rizzoli V, Quaini F, Mangoni L, Butturini U. The problem of infections in acute leukemias: origin, therapy and prevention by protective isolation *Ateneo Parmense Acta Biomed* 48:381-403, 1977
2. Rizzoli V, Sansoni P, Mangoni L, Quaini F, Pigoli G, Delsignore R, Baroni MC, Butturini U Erythropoietic stimulating activity of the liver in the neonatal life of the rat. *Haematologica* 63: 375-84, 1978
3. Delsignore R, Quaini F, Rizzoli V, Baroni MC, Zavaroni G, Butturini U Sézary syndrome with terminal evolution in acute myeloblastic leukemia *G Clin Med* 60:560-8, 1979
4. Orlic D, Quaini F, Kanski AA, Wu JM 2'5' -Adenylate inhibition of erythropoietin-dependent colony formation *Stem Cells* 1: 261-272, 1981
5. Orlic D, Wu JM, Carmichael, Quaini F, Kobylack M, Gordon AS Increased erythropoiesis and 2'5' - A polymerase activity in the marrow and spleen of phenylhydrazine-injected rats *Exp Hematol* 10: 478-490, 1982
6. Orlic D, Kirk E, Quaini F Increased 2,5 -Adenylate synthetase activity in the spleens of balb/c mice during hypoxia-stimulated erythropoiesis *Exp Hematol* 13: 821-828, 1985
7. Borelli TJ, Konno S, Vuolo LL, Quaini F, Wu JM Induction of human HL-60 leukemic cell differentiation by immune interferon is accompanied by an increase in NADase activity and by a decrease in DNA-binding proteins *Biochemistry International* 11: 61-68, 1985
8. Orlic D, Kirk E, Quaini F, Babbott S The 2'5' Adenylate (2-5 A) system in erythropoiesis *Blood Cells* 10: 193-201, 1985
9. Silvestrini G, Ferraccioli GF, Quaini F, Palummeri E, Bonucci E Adult osteopetrosis: study of two brothers *Appl Pathol* 5: 184-192, 1987
10. Rigon G, Baratti M, Quaini F, Calzetti S Polycythemic chorea. Description of a clinical case *Minerva Med* 78:1325-9, 1987
11. Passeri M, Palummeri E, Baroni MC, Quaini F, Quintavalla A, Barbagallo M, Franchini D, Ugolotti D Isotope retention for assessment of bone turnover in involutional osteoporosis *Clin Rheumatol Suppl* 2:35-40, 1989
12. Orlic D, Gill R, Feldschuh R, Quaini F, Malice A, Sandoval C Molecular mechanism for the inhibitory action of interferon on hematopoiesis *Ann NY Acad Sci* 554: 36-49, 1989

13. Olivetti G, Lagrasta C, Quaini F, Ricci R, Moccia G, Capasso JM, Anversa P Capillary growth in anemia-induced ventricular wall remodeling in the rat heart *Circ Res* 65:1182-90, 1989
14. Barbagallo M, Quaini F, Baroni MC, Barbagallo CM, Boiardi L, Passeri G, Arlunno B, Delsignore R, Passeri M Histological evidence of increased turnover in bone from spontaneously hypertensive rats *Cardioscience* 2:15-7, 1991
15. Gelmini G, Quaini F, Mineo F, Moccia G, Ricci R, Lagrasta C, Delsignore R, Olivetti G Effects of hypochromic microcytic anemia induced by an iron-copper free diet on whole blood filterability and other hemorheological parameters in rats *Clinical Hemorheology* 11: 605-610, 1991
16. Quaini F, Manganelli P, Pileri S, Magnani G, Ferrari C, Delsignore R, Sabattini E, Olivetti G: Immunohistological characterization of lymph node in two cases of adult onset Still's disease *J Rheumatol* 18: 9-16, 1991
17. Roncella S, Francia Di Celle P, D'Amore SG, Casoli C, Cutrona G, Muzzolini C, Quaini F, Nicolo G, Foa R, Pistoia V Cellular and molecular characterization of two cases of Castleman's disease, plasma cell variant *Leukemia and Lymphoma* 5: 391-399, 1991
18. Olivetti G, Quaini F, Lagrasta C, Ricci R, Tiberti GL, Capasso JM, Anversa P Myocyte cellular hypertrophy and hyperplasia contribute to ventricular wall remodeling in anemia-induced myocardial dysfunction in rats *Am J Pathol* 141:1-8, 1992
19. Manganelli P, Ferraccioli G, Passalacqua R, Quaini F Polymyalgia rheumatica and malignant neoplasms. A report of 3 cases *Recenti Prog Med* 83:200-2, 1992
20. Olivetti G, Cigola E, Lagrasta C, Ricci R, Quaini F, Monopoli A, Ongini E Spirapril prevents left ventricular hypertrophy, decreases myocardial damage and promotes angiogenesis in spontaneously hypertensive rats *J Cardiovasc Pharmacol* 21: 362-370, 1993
21. Olivetti G, Quaini F, Lagrasta C, Ricci R, Tosini P, Capasso JM, Anversa P Effects of genetic hypertension and nutritional anaemia on ventricular remodelling and myocardial damage in rats *Cardiovasc Res* 27: 1316-25, 1993
22. Beltrami CA, Finato N, Rocco M, Feruglio GA, Puricelli C, Cigola E, Quaini F, Sonnenblick EH, Olivetti G, Anversa P Structural basis of end-stage failure in ischemic cardiomyopathy in humans *Circulation* 89:151-163, 1994
23. Olivetti G, Melissari M, Balbi T, Quaini F, Cigola E, Sonnenblick EH, Anversa P Myocyte cellular hypertrophy is responsible for ventricular remodelling in the hypertrophied heart of middle aged individuals in the absence of cardiac failure *Cardiovasc Res* 28: 1199-1208, 1994
24. Olivetti G, Melissari M, Balbi T, Quaini F, Sonnenblick EH, Anversa P Myocyte nuclear and possible cellular hyperplasia contribute to ventricular remodeling in the hypertrophic senescent heart in humans *J Am Coll Cardiol* 24: 140-149, 1994
25. Quaini F, Cigola E, Lagrasta C, Sacconi G, Quaini E, Rossi C, Olivetti G, Anversa P End-stage cardiac failure in humans is coupled with the induction of proliferating cell nuclear antigen and nuclear mitotic division in ventricular myocytes *Circ Res* 75: 1050-1063, 1994
26. Cheng W, Reiss K, Kajstura J, Kowal K, Quaini F, Anversa P Downregulation of the IGF-1 system parallels the attenuation in the proliferative capacity of rat

- ventricular myocytes during postnatal development *Lab Invest* 72: 646-58, 1995
27. Kajstura J, Mansukhani M, Cheng W, Krajewski S, Reed JC, Quaini F, Sonnenblick EH, Anversa P Programmed Cell Death and expression of the protooncogene bcl-2 in myocytes during postnatal maturation of the heart *Exper Cell Res* 219, 110-121, 1995
 28. Anversa P, Kajstura J, Reiss K, Quaini F, Baldini A, Olivetti G, Sonnenblick EH Ischemic Cardiomyopathy: myocyte cell loss, myocyte cellular hypertrophy, and myocyte cellular hyperplasia *Ann NY Acad Sci* 752, 47-64, 1995
 29. Olivetti G, Quaini F, Lagrasta C, Cigola E, Ricci R, Maestri R, Anversa P Cellular basis of ventricular remodeling after myocardial infarction in rats *Cardioscience* 6:101-6, 1995
 30. Olivetti G, Quaini F, Sala R, Lagrasta C, Corradi D, Bonacina E, Gambert S, Cigola E, Anversa P Acute myocardial infarction in humans is associated with activation of programmed myocyte cell death in the surviving portion of the heart *J Mol Cell Cardiol* 28: 2005-2016, 1996
 31. Gemignani F, Marchesi G, Di Giovanni G, Salih S, Quaini F, Nobile-Orazio E Low-grade non-Hodgkin B-cell lymphoma presenting as sensory neuropathy *Eur J Neurol* 36:138-41, 1996
 32. Olivetti G, Abbi R, Quaini F, Kajstura J, Cheng W, Nitahara JA, Quaini E, Di Loreto C, Beltrami CA, Krajewsky S, Reed J, Anversa P Apoptosis in the failing human heart *N Engl J Med* 336: 1131-114, 1997
 33. Manganelli P, Quaini F, Olivetti G, Savini M, Pileri S Relapsing polychondritis with Castleman-like lymphadenopathy: a case report *Clin Rheumatol* 16: 480-484, 1997
 34. Olivetti G, Cigola E, Maestri R, Lagrasta C, Quaini F The Failing Heart *Adv Clin Path* 1:137-148, 1997
 35. Manganelli P, Quaini F, Andreoli AM, Lagrasta C, Pilato F, Zuccarelli A, Monteverdi R, D'Aversa C, Olivetti G Quantitative analysis of apoptosis and bcl-2 in Sjogren Syndrome *J Rheumatol* 24: 1552-59, 1997
 36. Fraternali-Orcioni G, Falini B, Quaini F, Campo E, Piccioli M, Gamberi B, Pasquinelli G, Poggi S, Ascani S, Sabattini E, Pileri SA Beta-HCG aberrant expression in primary mediastinal large B-cell lymphoma *Am J Surg Pathol* 23:717-21, 1999
 37. Olivetti G, Cigola E, Maestri R, Corradi D, Lagrasta C, Quaini F. [Does apoptosis participate in heart failure?]. *Cardiologia*. 44 Suppl 1:859-61. 1999
 38. Fiorina P, Astorri E, Albertini R, Secchi A, Mello A, Lanfredini M, Craveri A, Olivetti G, Quaini F Soluble antiapoptotic molecules and immune activation in chronic heart failure and unstable angina pectoris *J Clin Immunol* 20:101-6, 2000
 39. Olivetti G, Cigola E, Maestri R, Lagrasta C, Corradi D, Quaini F Recent advances in cardiac hypertrophy *Cardiovasc Res* 45:68-75, 2000
 40. Manganelli P, Delsante G, Bianchi G, Fietta P, Quaini F Remitting seronegative symmetrical synovitis with pitting oedema in a patient with myelodysplastic syndrome and relapsing polychondritis *Clin Rheumatol* 20:132-5, 2001
 41. Orlic D, Kajstura J, Chimenti S, Limana F, Jakoniuk I, Quaini F, Nadal-Ginard B, Bodine DM, Leri A, Anversa P Mobilized bone marrow cells repair

- the infarcted heart, improving function and survival *Proc Natl Acad Sci USA* 98: 10344-349, 2001
42. Leri A, Quaini F, Kajstura J, Anversa P Myocyte death and myocyte regeneration in the failing human heart *Ital Heart J* 2:12S-14S, 2001
 43. Quaini F, Urbanek K, Beltrami AP, Finato N, Beltrami CA, Nadal-Ginard B, Kajstura J, Leri A, Anversa P Chimerism of the transplanted human heart *N Engl J Med* 346:15-22, 2002
 44. Limana F, Urbanek K, Chimenti S, Quaini F, Leri A, Kajstura J, Nadal-Ginard B, Izumo S, Anversa P bcl-2 overexpression promotes myocyte proliferation *Proc Natl Acad Sci USA* 99: 6257-62, 2002
 45. Urbanek K, Quaini F, Tasca G, Torella D, Castaldo C, Nadal-Ginard B, Leri A, Kajstura J, Quaini E, Anversa P Intense myocyte formation from cardiac stem cells in human cardiac hypertrophy *Proc Natl Acad Sci USA* 100:10440-5, 2003
 46. Manganelli P, Fietta P, Martella EM, Quaini F. Clinical and histological coexistence of inflammatory pseudotumour of the lymph nodes and rheumatoid arthritis. *Clin Rheumatol.* 22:467-71, 2003
 47. Quaini F, Urbanek K, Graiani G, Lagrasta C, Maestri R, Monica M, Boni A, Ferraro F, Delsignore R, Tasca G, Leri A, Kajstura J, Quaini E, Anversa P The regenerative potential of the human heart *Int J Cardiol* 95: 26-8, 2004
 48. Kajstura J, Rota M, Whang B, Cascapera S, Hosoda T, Bearzi C, Nurzynska D, Kasahara H, Zias E, Bonafè M, Nadal-Ginard B, Torella D, Nascimbene A, Quaini F, Urbanek K, Leri A, Anversa P Bone marrow cells differentiate in cardiac lineages after infarction independently of cell fusion *Circ Res* 96:127-37, 2005
 49. Urbanek K, Torella D, Sheikh F, De Angelis A, Nurzynska D, Silvestri F, Beltrami CA, Bussani R, Beltrami AP, Quaini F, Bolli R, Leri A, Kajstura J, Anversa P: Myocardial Regeneration by Activation of Multipotent Cardiac Stem Cells in Ischemic Heart Failure *Proc Natl Acad Sci USA* 102: 8692-97, 2005
 50. Linke A, Muller P, Nurzynska D, Casarsa C, Torella D, Nascimbene A, Castaldo C, Cascapera S, Bohm M, Quaini F, Urbanek K, Leri A, Hintze T, Kajstura J, Anversa P: Cardiac stem cells in the dog heart regenerate infarcted myocardium improving cardiac performance *Proc Natl Acad Sci USA* 102: 8966-71, 2005
 51. Graiani G, Lagrasta C, Migliaccio E, Spillmann F, Meloni F, Madeddu P, Quaini F, Padura IM, Lanfranccone L, Pelicci PG, Emanuelli C Genetic deletion of the p66Shc adaptor protein protects from Angiotensin II-induced myocardial damage *Hypertension* 46: 1-8, 2005
 52. Urbanek K, Rota M, Cascapera S, Bearzi C, Nascimbene A, De Angelis A, Hosoda T, Chimenti S, Baker M, Limana F, Nurzynska D, Torella D, Rotatori F, Rastaldo R, Musso E, Quaini F, Leri A, Kajstura J, Anversa P Cardiac stem cells possess growth factor-receptor systems that after activation regenerate the infarcted myocardium, improving ventricular function and long-term survival *Circ Res* 97: 663-673, 2005
 53. Spillmann F, Graiani G, Van Linthout S, Meloni M, Campesi I, Lagrasta C, Westermann D, Tschöpe C, Quaini F, Emanuelli C, Madeddu P Regional and global protective effects of tissue kallikrein gene delivery to the peri-infarct myocardium *Regenerative Medicine*; 1, 2: 235-254, 2006

54. Bearzi C, Rota M, Hosoda T, Tillmanns J, Nascimbene A, De Angelis A, Yasuzawa-Amano S, Trofimova I, Siggins RW, Lecapitaine N, Cascapera S, Beltrami AP, D'Alessandro DA, Zias E, Quaini F, Urbanek K, Michler RE, Bolli R, Kajstura J, Leri A, Anversa P. Human cardiac stem cells. *Proc Natl Acad Sci U S A* 28;104:14068-7, 2007
55. Stilli D, Lagrasta C, Berni R, Bocchi L, Savi M, Delucchi F, Graiani G, Monica M, Maestri R, Baruffi S, Rossi S, Macchi E, Musso E, Quaini F. Preservation of ventricular performance at early stages of diabetic cardiomyopathy involves changes in myocyte size, number and intercellular coupling. *Basic Res Cardiol* 102: 488-499, 2007
56. Mastorci F, Vicentini M, Viltart O, Manghi M, Graiani G, Quaini F, Meerlo P, Nalivaiko E, Maccari S, Sgoifo A. Long-term effects of prenatal stress: Changes in adult cardiovascular regulation and sensitivity to stress. *Neurosci Biobehav Rev* 33 (2):191-203, 2009
57. Fietta P, Delsante G, Quaini F. Hematologic manifestations of connective autoimmune diseases. *Clin Exp Rheumatol*. 27:140-54, 2009
58. Oikawa A, Siragusa M, Quaini F, Mangialardi G, Katare RG, Caporali A, van Buul JD, van Alphen FP, Graiani G, Spinetti G, Kraenkel N, Prezioso L, Emanuelli C, Madeddu P. Diabetes Mellitus Induces Bone Marrow Microangiopathy. *Arterioscler Thromb Vasc Biol* 30:498-508, 2010
59. Prezioso L, Tanzi S, Galaverna F, Frati C, Testa B, Savi M, Graiani G, Lagrasta C, Cavalli S, Galati S, Madeddu D, Lodi Rizzini E, Ferraro F, Musso E, Stilli D, Urbanek K, Piegari E, De Angelis A, Maseri A, Rossi F, Quaini E, Quaini F. Cancer Treatment-Induced Cardiotoxicity: a Cardiac Stem Cell Disease? *Cardiovasc Hematol Agents Med Chem*. 8:55-75, 2010
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63. Rossini A, Frati C, Lagrasta C, Graiani G, Scopece A, Cavalli S, Musso E, Baccarin M, Di Segni M, Fagnoni F, Germani A, Quaini E, Mayr M, Xu Q, Barbuti A, Difrancesco D, Pompilio G, Quaini F, Gaetano C, Capogrossi MC. Human Cardiac and Bone Marrow Stromal Cells exhibit distinctive properties related to their origin. *Cardiovasc Res*. 89:650-60, 2011
64. Mormile R, De Michele M, Squarcia U, Quaini F. Hypertrophic cardiomyopathy in neonates of diabetic mothers: indirect evidence for a model of apoptotic reversibility by survivin? *Int J Cardiol*. 146:244-5, 2011
65. Van Linthout S, Spillmann F, Graiani G, Miteva K, Peng J, Van Craeyveld E, Meloni M, Tolle M, Escher F, Subasiguller A, Doehner W, Quaini F, De Geest B, Schultheiss HP, Tschoepe C. Down-regulation of endothelial TLR4 signalling after apo A-I gene transfer contributes to improved survival in an

- experimental model of lipopolysaccharide-induced inflammation. *J Mol Med.* 89:151-60, 2011
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 69. Mormile R, Vittori G, De Michele M, Squarcia U, Quaini F. Postnatal regression of hypertrophic cardiomyopathy in infants of diabetic mothers: a crosstalk between Hox genes and epidermal growth factor (EGF) gene polymorphism? *Int J Cardiol.* 2011 150:340
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- hematopoietic stem cell mobilization by altering niche function. *Sci Transl Med.* 2011 Oct 12;3(104):104ra101.
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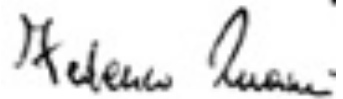
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Parma, Maj 2016

Federico Quaini

A handwritten signature in black ink, appearing to read "Federico Quaini". The signature is written in a cursive style with a large initial 'F'.